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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/045,937  | 10/19/2001  | David J. Beebe       | 282.020             | 4878             |
| 23598   | 7590        | 06/04/2004           | EXAMINER            |                  |
| BOYLE FREDRICKSON NEWHOLM STEIN & GRATZ, S.C.<br>250 E. WISCONSIN AVENUE<br>SUITE 1030<br>MILWAUKEE, WI 53202 |             |                      | ALEXANDER, LYLE     |                  |
|   |             | ART UNIT             |                     | PAPER NUMBER     |
|   |             |                      |                     | 1743             |

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                              |
|------------------------------|-------------------------------|------------------------------|
| <b>Office Action Summary</b> | Application No.<br>10/045,937 | Applicant(s)<br>BEEBE ET AL. |
|                              | Examiner<br>Lyle A Alexander  | Art Unit<br>1743             |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 15 March 2004.  
 2a) This action is FINAL.                  2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-27 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-27 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The 3/15/04 amendments to the independent add the limitation "... wherein the first and second indicia's are independent of size". The claim is vague and indefinite what relationship between the indicator and size is intended.

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-27 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Beebe et al.

Bebbe et al. teach a microfluidic device using a hydrogel, a photo-initiator, a cross-linker and a pH indicator to optically determine fluidic characteristics. Column 11 lines 18+ teach a pH sensitive polymer mixture hydrogel(308) that has been read on the claimed immobilized dye. Column 34 lines 32-42 teach a change in optical properties in response to the detection of changes in pH.

***Response to Arguments***

Applicant's arguments filed 3/15/04 have been fully considered but they are not persuasive.

Applicants remarks directed to McDevitt et al. and this rejection has been vacated.

Applicants state Bebbe et al. fails to teach colorimetric indicia. Applicants characterized Bebbe et al. on the second page of their response in the paragraph bridging the first and second pages a "... second component to produce a colored change ...". Additionally, Bebbe et al. teach in column 34 lines 32-42 a change in optical properties as a result of changed in pH.

Applicants state Bebbe et al. fails to teach immobilizing a dye within a hydrogel. Bebbe et al. teach in column 11 lines 18+ teach a pH sensitive polymer mixture hydrogel(308) that has been read on the claimed immobilized dye.

Finally, Applicants state with respect to claims 1 and 10, Bebbe et al. fails to teach mixing a dye into a prepolymer mixture and placing the mixture into a channel. These remarks are not commensurate in scope with these claims. However, Bebbe et al. teach in column 11 lines 18+ teach a pH sensitive polymer mixture hydrogel(308) that would meet these limitations if later claimed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lyle A Alexander whose telephone number is 571-272-1254. The examiner can normally be reached on Monday, Wednesday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Lyle A Alexander  
Primary Examiner  
Art Unit 1743